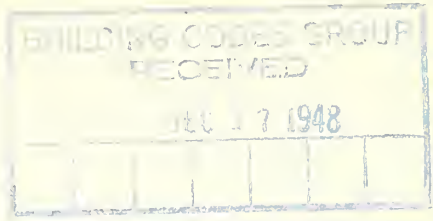


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U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS

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ACOUSTICS

Publications by Members of the Staff of the
National Bureau of Standards

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GENERAL INFORMATION

Some of the publications in this list have appeared in the regular series of publications of the Bureau, and others in various scientific and technical journals. Unless specifically stated, papers are not obtainable directly from the National Bureau of Standards.

Where the price is given, the publication can be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. The prices quoted are for delivery to addresses in the United States, its territories and possessions, and in certain foreign countries which extend the franking privilege. In the case of all other countries, one-third the cost of the publication should be added to cover postage. Remittances should be made either by coupons (obtainable from the Superintendent of Documents in sets of 20 for \$1.00 and good until used), or by check or money order payable to the "Superintendent of Documents, Government Printing Office" and sent to him with the order. Stamps are not accepted.

Publications marked "OP" are out of print, but, in general, may be consulted at technical libraries.

For papers in other scientific or technical journals, the name of the journal or of the organization publishing the article is given in abbreviated form, with the volume number (underscored), page, and year of publication, in the order named. The Bureau cannot supply copies of these journals, or reprints of them, and it is unable to furnish information as to their availability or price. They, too, can usually be consulted at technical libraries.

Series letters with serial numbers are used to designate Bureau publications:

S = "Scientific Paper". S-1 to S-329 are "Reprints" from the "Bulletin of the Bureau of Standards". S-330 to S-572 were published as "Scientific Papers of the Bureau of Standards". This series was superseded by the "Bureau of Standards Journal of Research" in 1928.

T = "Technologic Paper". T-1 to T-370. This series was superseded by the "Bureau of Standards Journal of Research" in 1928.

RP = "Research Paper". These are reprints of articles appearing in the "Bureau of Standards Journal of Research" and the "Journal of Research of the National Bureau of Standards", the latter being the title of this periodical since July, 1934 (volume 13, number 1).

C = "Circular"

M = "Miscellaneous Publication".

TNB = "Technical News Bulletin".

BMS = "Building Materials and Structures" publication

LC = "Letter Circular".

TRBM = "Technical Report on Building Materials".

CRPL = "Report of the Central Radio Propagation Laboratory"

Circular C24 (and supplements) contains a complete list of the Bureau's publications and abstracts of their contents (1901-1944). It is sold by the Superintendent of Documents for \$1.50.

Circular C460 (In press, available after November 1, 1948) will supersede in large part Circular C24. All publications from 1901 through June 30, 1947 will be listed; brief abstracts will be carried for all articles published since January, 1942. The price is 75 cents.

Announcement of new publications is made each month in the Technical News Bulletin, which is obtainable by subscription at \$1.00 per year.

SOUND ABSORPTION

<u>Title</u>	<u>Series</u>	<u>Price</u>
The absorption of sound at oblique angles of incidence. P. R. Heyl; V. L. Chrisler and W. F. Snyder, BS J. Research <u>4</u> , 289 (1930)	RP149	OP
The measurement of sound absorption by oscillograph records. V. L. Chrisler, J. Acous. Soc. Am. <u>1</u> , 418 (1930)		
Recent advances in sound absorption measurements. V. L. Chrisler. J. Acous. Soc. Am. <u>2</u> , 123 (1930)		
Measurement of sound absorption. V. L. Chrisler and W. F. Snyder. BS J. Research <u>5</u> , 957 (1930)	RP242	OP
An automatic reverberation meter for measurement of sound absorption. W. F. Snyder. BS J. Research <u>9</u> , 47 (1932)	RP457	OP
Some of the factors which affect measurement of sound absorption. V. L. Chrisler and Catherine E. Miller. BS J. Research <u>9</u> , 175 (1932)	RP465	OP

<u>Title</u>	<u>Series</u>	<u>Price</u>
New Industry - manufacture of sound absorb- ing material. (August 1932)	TMB184	OP
Dependence of sound absorption upon area and distribution of absorbent material. V. L. Chrisler. J. Research NBS <u>13</u> , 169 (1934)	RP700	5¢
Sound absorption coefficients. V.L.Chrisler. J. Acous. Soc. Am. <u>6</u> , 115 (1934)		
Effect of paint on the sound absorption of acoustic materials. V. L. Chrisler: J. Research NBS <u>24</u> , 547 (1940)	RP1298	10¢
Sound absorption coefficients of the more common acoustic materials. Free on application to the National Bureau of Standards. Supersedes LC-714 and LC-715 (August 1947)	LC870	
Absorption and scattering by sound absorbent cylinders. R. L. Cook and P. Chrzanowski. J. Research NBS <u>36</u> , 393 (April 1946); also J. Acous. Soc. Am. <u>17</u> , No. 4, 315 (August 1946)	RP1709	10¢

SOUND TRANSMISSION

<u>Title</u>	<u>Series</u>	<u>Price</u>
Theory and interpretation of experiments on the transmission of sound through partition walls. Edgar Buckingham. Sci. Pap. BS, <u>20</u> , 193 (1925)	S506	10¢
Transmission and absorption of sound by some building materials. E. A. Eckhardt and V. L. Chrisler. Sci. Pap. BS <u>21</u> , 37 (1926)	S526	OP

<u>Title</u>	<u>Series</u>	<u>Price</u>
Transmission of sound through building materials. V. L. Chrisler. Sci. Pap. BS <u>22</u> , 227 (1927)	S552	OP
Transmission of sound through wall and floor structures. V. L. Chrisler and W. F. Snyder. BS J. Research <u>2</u> , 541 (1929)	RP48	OP
Measurement of sound transmission. V. L. Chrisler. J. Acous. Soc. Am. <u>1</u> , 175 (1930)		
Sound transmission of materials. V. L. Chrisler. Am. Arch. <u>138</u> , 32 (1930)		
Recent sound transmission measurements at the National Bureau of Standards. V. L. Chrisler and W. F. Snyder. J. Research NBS <u>14</u> , 749 (1935)	RP800	OP
Methods for determining sound transmission loss in the field. A. London J. Research NBS <u>26</u> , 419 (1941)	RP1388	10¢

ARCHITECTURAL ACOUSTICS, MISCELLANEOUS

<u>Title</u>	<u>Series</u>	<u>Price</u>
Acoustics of rooms. E. A. Eckhardt. J. Franklin Institute. <u>195</u> , 799 (1923)		
The sound insulating properties of partition walls (chiefly lath and plaster). E. A. Eckhardt and V. L. Chrisler. Am. Arch. <u>128</u> , 405 (1925)		
Soundproofing of apartment houses. V. L. Chrisler. Tech. Pap. BS <u>21</u> , 255 (1927)	T337	OP
Sound insulation. V. L. Chrisler. Architecture <u>57</u> , 87 (Feb. 1928)		

<u>Title</u>	<u>Series</u>	<u>Price</u>
Soundproofing apartment houses. V. L. Chrisler. Arch. Forum <u>50</u> , 623. (1929), 765. (1929)...		
Soundproofing partitions. (December 1931)	TNB176	
A discussion of some of the principles of acoustical insulation. V. L. Chrisler. (1933)	C403	OP
Acoustical work of the National Bureau of Standards. V. L. Chrisler. J. Acous. Soc. Am. <u>7</u> , 79 (1935)		
Architectural acoustics. P. R. Heyl and V. L. Chrisler. (1938) Supersedes C396	C418	5¢
Sound insulation of wall and floor constructions. V. L. Chrisler. (1939) Supplement No. 1 by V. L. Chrisler (1940)	BMS17	20¢
Supplement No. 2 by Albert London (1947)	BMS17	5¢
	BMS17	10¢
Fire-resistance and sound-insulation ratings for walls, partitions, and floors (1946) (Free on application to the NBS)...	TRBM44	
Behavior of acoustic materials. R. K. Cook. J. Soc. Motion Picture Engineers <u>51</u> , 192 (1948)		

ACOUSTIC INSTRUMENTS

<u>Title</u>	<u>Series</u>	<u>Price</u>
The tonodeik, or pitch indicator. L. E. Dodd. Sci. Am. <u>115</u> , 410, 422 (1916)		

<u>Title</u>	<u>Series</u>	<u>Price</u>
A precision high-speed oscillograph camera; the precise measurement of small time intervals. E. A. Eckhardt. J. Franklin Inst. <u>194</u> , 49 (1922)		
A piezoelectric method for the instantaneous measurement of high pressures. J. C. Karcher. Sci. Pap. BS <u>18</u> , 257 (1922)	S445	OP
Electron tube tuning fork drive. E. A. Eckhardt, J. C. Karcher, and M. Keiser. J. Opt. Soc. Am. <u>6</u> , 949 (1922)		
A method for the measurement of sound intensity. J. C. Karcher. Sci. Pap. BS <u>19</u> , 105 (1923)	S473	OP
Radio-acoustic method of position finding in hydrographic surveys. H. H. Heck, E. A. Eckhardt and M. Keiser. U. S. Coast and Geodetic Survey, spec. pub. No. 107 (1924)		
Measurement of small time intervals. P. P. Quayle, J. Franklin Inst. <u>203</u> , 407 (1927)		
Calibration of a tuning fork by comparison with a pendulum. C. Moon. BS J. Research <u>4</u> , 213 (1930)	RP144	.5¢
Measurements with a reverberation meter. V. L. Chrisler and W. F. Snyder. J. Soc. Motion Picture Engineers. <u>18</u> , 479 (1932)		
Absolute pressure calibration of microphones. R. K. Cook. J. Res. NBS <u>25</u> , 489 (1940); also published in abbreviated form in J. Acous. Soc. Am. <u>12</u> , 415 (1941)	RP1341	OP

<u>Title</u>	<u>Series</u>	<u>Price</u>
Acoustic performance of 16-millimeter sound motion-picture projectors. W. F. Snyder (1942)	C439	15¢
Measurement of electromotive force of a microphone. R. K. Cook. J. Acous. Soc. Am. <u>19</u> , 503 (1947)		
A short-tube method for measurement of impedance. R. K. Cook. J. Acous. Soc. of Am. <u>19</u> , 922 (1947)		
Absolute calibration of vibration pick-ups. A. London. Tech. News Bulletin <u>32</u> , No. 1, p.8 (Jan. 1948)	TNB	10¢
Electronic phasemeter. E. F. Florman and A. Tait. Report of Central Radio Propagation Laboratory (Mar. 1948)	CRPL-5-2	
Improved electronic phasemeter (Popular Description) Tech. News Bulletin <u>32</u> No. 5, p. 60 (May 1948)	TNB	10¢

SOUND PROPAGATION

<u>Title</u>	<u>Series</u>	<u>Price</u>
The influence of terminal apparatus on telephone transmission. Louis Cohen. Bul. BS <u>5</u> , 231 (1909)	S101	OP
Effect of phase of harmonics upon acoustic quality. A. G. Lloyd and P. G. Agnew. Bul. BS <u>6</u> , 255 (1909); also published in Elec. Review and West Electn. <u>55</u> , 487 (Sept. 1909)	S127	OP
Photography of bullets in flight. P. P. Quayle. J. Franklin Inst. <u>193</u> , 627 (1922)		

<u>Title</u>	<u>Series</u>	<u>Price</u>
Accurate determinations of the speed of sound in sea water. E. A. Eckhardt. Phys. Rev. <u>24</u> , 452 (1924)		
Single-spark photography and its application in ballistics. P. P. Quayle. Nature <u>115</u> , 765 (1925)		
Transmission of sound through voice tubes. E. A. Eckhardt, V. L. Chrisler, P. P. Quayle and M. J. Evans; with an appended note on the absorption in rigid pipes. Edgar Buckingham. Tech. Pap. BS <u>21</u> , 163 (1926)	T333	15¢

AIRPLANE NOISE INSULATION

<u>Title</u>	<u>Series</u>	<u>Price</u>
Soundproofing of airplane cabins. V. L. Chrisler and W. F. Snyder. BS J. Research <u>2</u> , 897 (1929)	RP63	OP
Decreasing noise in airplane cabins. Domestic Air News. Serial 49 (March 31, 1929)		
Reduction of airplane noise. Aeronautics Bul. No. 25 (October 1930)		
Progress in soundproofing of airplane cabins. Air Commerce Bul. <u>1</u> , No. 21 (1930)		
Report of test on reduction of airplane noise by use of mufflers. Air Commerce Bul. <u>4</u> , No. 12 (1932). Reprints available on application to the National Bureau of Standards.		

<u>Title</u>	<u>Series</u>	<u>Price</u>
Principles, practice and progress of noise reduction in airplanes. A. London. Tech. Notes National Advisory Committee for Aeronautics. No. 748 (1940)		

MISCELLANEOUS

<u>Title</u>	<u>Series</u>	<u>Price</u>
Survey of hearing aids: Written in part by P. R. Heyl. Volta Review <u>29</u> , No. 10, p.1. (1927)		
Ultrasonic measurements of the compressibility of solutions and of solid particles in suspension (ultrasonic velocity measurements). C.R. Randall. BS J. Research <u>8</u> , 79 (1932)	RP402	10¢
Acoustical investigations of Joseph Henry as viewed in 1940. W. F. Snyder. J. Acous. Soc. Am. <u>12</u> , 58 (1940)		
Printed circuits for hearing aids. E. L. R. Corliss. Volta Review <u>49</u> , No. 8 (Sept. 1947)		
Cavity pressure method for measuring the gain of hearing aids. E.L.R. Corliss and G. S. Cook. J. Res. NBS <u>40</u> , p.85 (Jan 1948); also in J. Acous. Soc. Am. <u>20</u> , No. 2, p.131 (March 1948)	RP1857	10¢
Cavity pressure method for measuring the gain of hearing aids. (Semi-technical summary) Tech. News Bul. <u>32</u> , No. 2, p. 22 (Feb. 1948)	TNB	10¢
Theory of Wagner ground balance for alternating current bridges. R. K. Cook. J. Research NBS <u>40</u> , 245 (March 1948)	RP1869	10¢